

Keeping the McDonald Candle Lit

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Acknowledgments







Past discussions from speakers:











Disclaimer



All information in this presentation is just information.

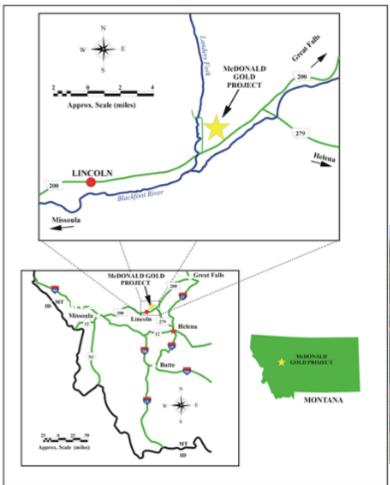
Make decisions, judgments, investments, actions based on your own interpretation.

You are responsible for your revised approach and new thinking with this project.

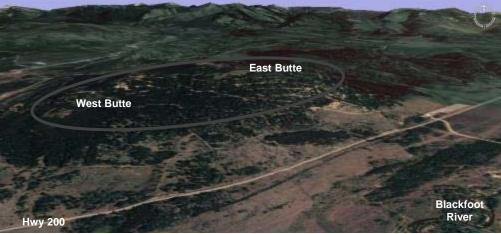
We're engineers, not lawyers or geologists, but you get the point....



Where is McDonald?









MONTANA TECH

What is a 'McDonald?' (i.e. Background)



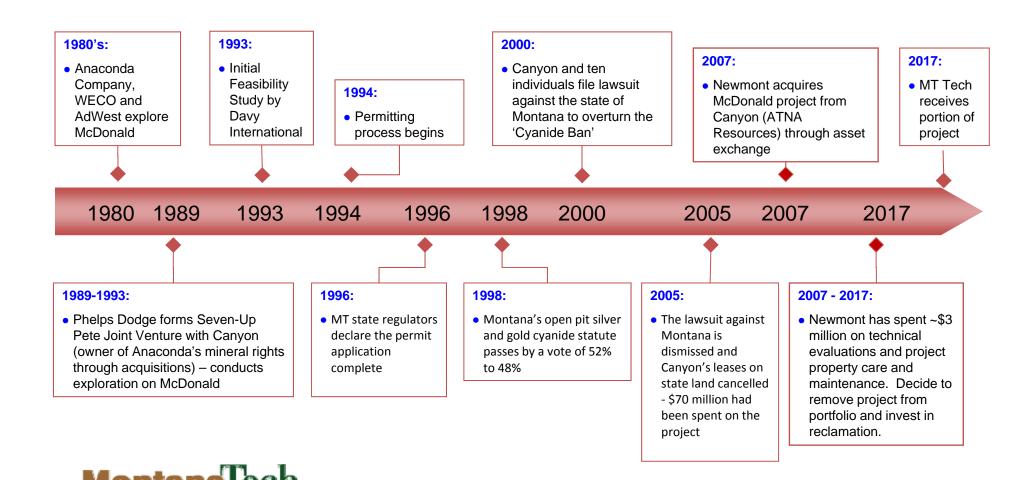
Silver-Gold Exploration Project, 7 miles west of Lincoln, Montana





McDonald Project History





Geologic Reviews







Newmont Liability Reduction Plan



- 2012, developed underground model.
 Resource too small for Newmont.
- 2012-2015, not successful in divesting project.
- 2015, plan to reduce liability on project
 - Sieben Ranch
 - Other private land owners
 - DEQ
 - NDRC
 - Mt Tech



2016+ Reclamation by Newmont



Project assets on Sieben Ranch

- Plug and abandon piezometers and water wells
- Reclaim drill pads and exploration roads

Exploration Samples

Dispose of reverse circulation samples

Transferred to MT Tech School of Mines

- All core
- Chip boards
- Project documentation



Why MT Tech School of Mines????



Is it the gold?

Is it the silver?

Is it a research opportunity?

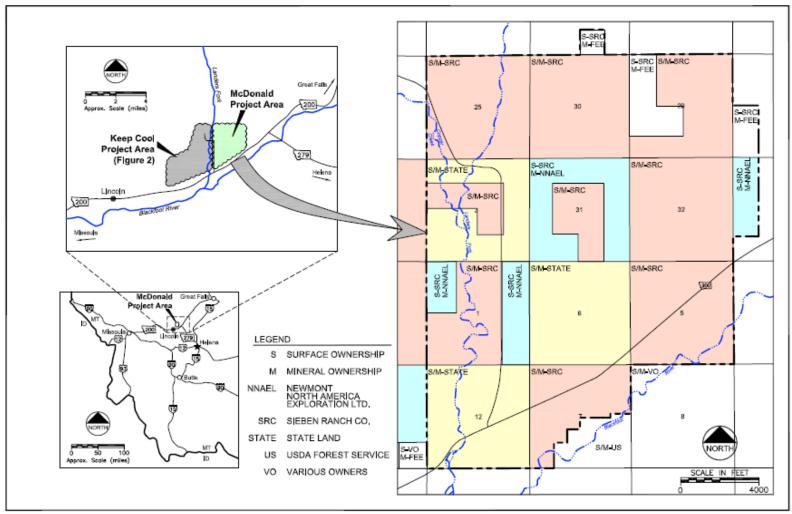
Is it an education opportunity for many disciplines?

Is it based on MT School of Mines being identified as the recipient of the proceeds from this State Land Section?



Surface and Mineral Ownership





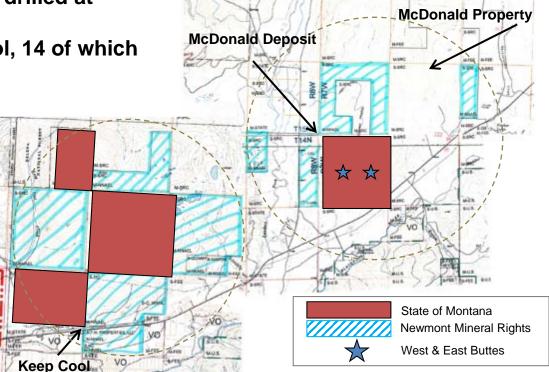
January 2008

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- The site has been extensively drilled, with 600+ holes
 - Majority was reverse-circulation drilling focused on bulk-tonnage, OP mine development
 - 46 diamond drill holes were drilled at McDonald
 - 40 holes drilled at Keep Cool, 14 of which were diamond drill holes





Project Assets



 Site has ~5 miles of access roads, ~30 pads supporting wells and dewatering data provided by 165 (and being reduced) monitoring wells

Heated core storage facility is located nearby

>500,000 total feet of drilling

>34,000 feet of HQ and PQ core (63.5 and 85mm)



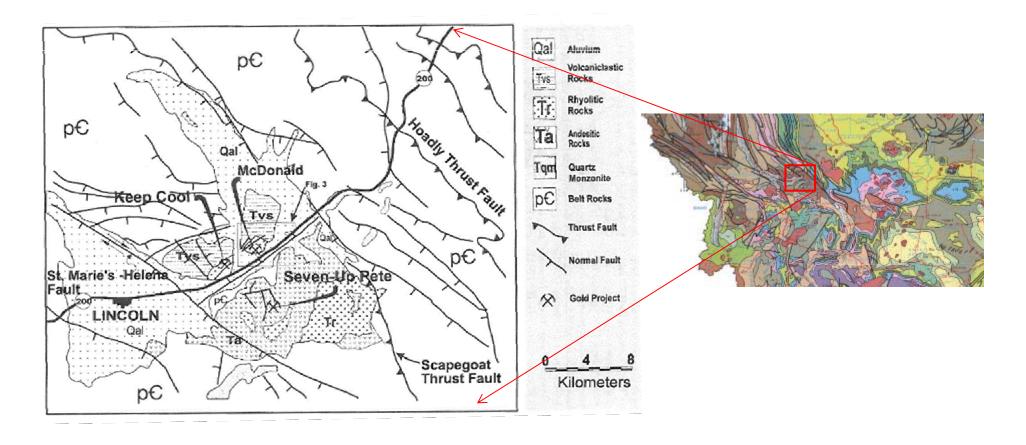


Heated core storage facility along Hwy 200

Monitoring well

Western Montana Regional Geology





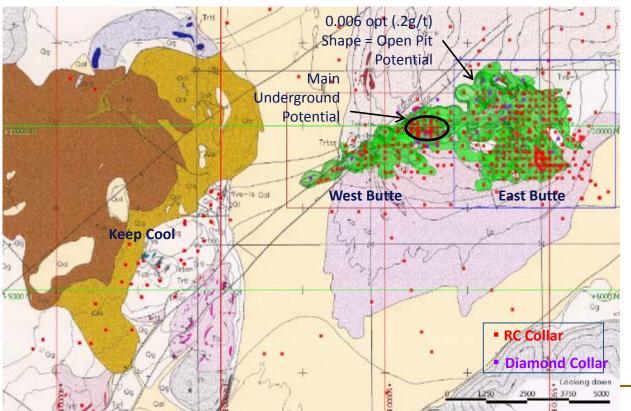


McDonald & Keep Cool



Refer to

"The geology of the McDonald Gold Deposit, Lewis and Clark County, Montana", Bartlett, Mark W.; Enders, M. Stephen; Volberding, John E.; and, Wilkinson, William H. Geological Society of Nevada, 1996



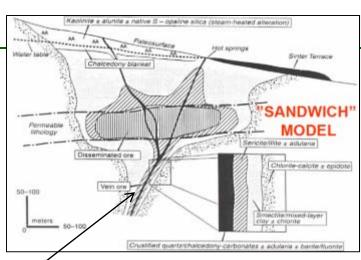




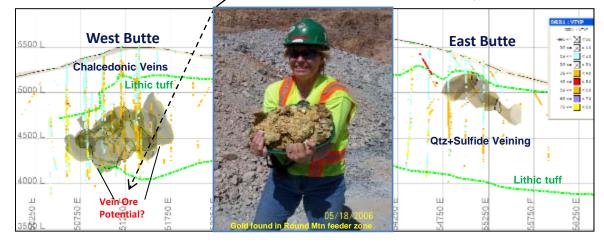


Geologic Model

 Quartz Vein-hosted, High-grade, Low-sulfidation System



LS Epithermal models, both showing alteration and vein zonation; Round Mtn (above) shows preferential mineralization in "permeable lithology", McDonald (below), is similar





MONTANA TECH

Metallurgy Development History

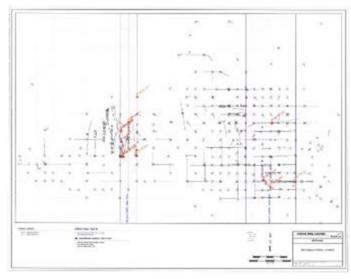


Previously Viewed as a Large, Low-grade, Open Pit Project

- Prior owners focused on a large, low-grade deposit (~ 1 g Au/t)
- Cyanide heap leach prospect with 75% recovery

Newmont research

- Potential for ammonium thiosulfate heap leach
- Potential for gravity gold recovery when coarse free gold was noted in samples







Economics Change with Time/Owner



Large, Low-grade, Disseminated Au+Ag Open Pit

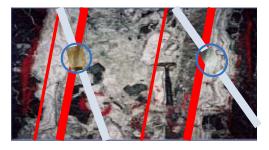
- Phelps Dodge, and others, approached the deposit as a large, disseminated deposit
- Open pit scenario considered bulk mining:
 10.9 Moz Au @ 0.5g/t
 63.7 Moz Ag @ 3.0g/t



Round Mountain, NV Open Pit: massive, low-grade (0.017opt Au) volcanic-hosted disseminated gold deposit has produced >10Moz in last 20 yrs

High-grade Underground

- Based on core reviews, Newmont noted steeply-dipping, 1-5m wide, high-grade Au/Ag mineralization is associated with swarms of 1mm-10cm wide low-sulfidation quartz vein stockwork and vein/breccias
- Mapping of ENE to NW silica sinter at surface suggests high level of system preservation and potential for ~300m vertical extent & feeder zones
- → Low-impact UG mining scenario



Graphic representation of similar, but smaller, LS veins and stockwork containing abundant coarse

Au at McD (McD cores superimposed on Midas, NV, Colorado Grande LS vein ore face)

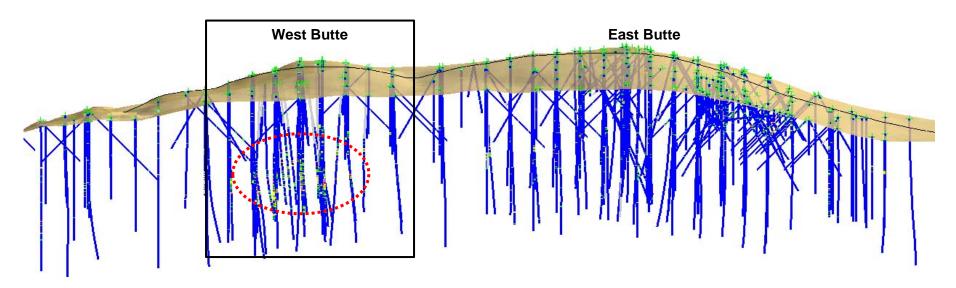


McDonald Underground Development



Option at West Butte is Attractive

- Narrow, high-grade Au/Ag mineralization associated with quartz veins/breccias at West Butte likely constitutes an underground mining opportunity
- High grade targets in substantially drilled-out West Butte area tested by Echo Bay due diligence core drilling prompted restricted-grade shell & block model (>0.10opt) and conceptual underground study
- A low-capex, quick access, low-impact decline and UG-mining scenario was tested at various cutoff grades for West Butte

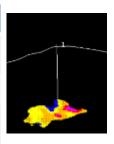


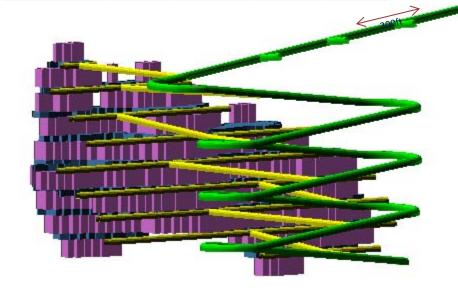
West Butte: UG Mine Potential



Preliminary analysis indicates mineral resource of ~500K Au

Potential Mineral Inventory of Mineable Shapes									
Cutoff Grade (opt)	Au (K oz)	Au (opt)	Ag (K oz)	Ag (opt)					
0.20	305	0.26	857	0.74					
0.14 (4.8g/t)	523	0.21 (7.2g/t)	1,566	0.64 (22g/t)					
0.10	621	0.19	1,935	0.59					



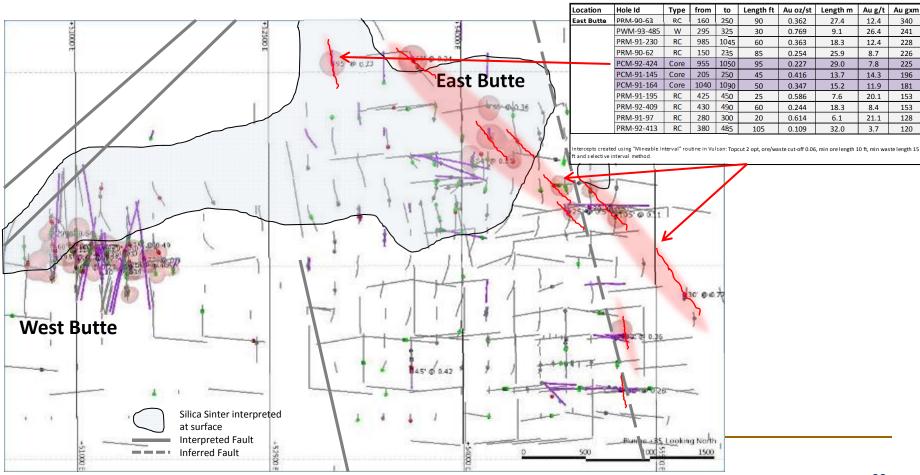


Design Parameters					
Design Software	Vulcan (stope optimizer)				
Mining Method	Longhole Open Stoping				
Orebody Width	150-250ft (45-75m)				
Stope Size	20ft x 60ft (6 x 18m)				
Decline	2,625ft (800m) decline to ore - 6,562ft (2,000m) total				
Level access & drift	9,840ft (3,000m)				
Exhaust Vent	738ft (225m)				
Dilution	10%				

East Butte: Excellent UG Exploration Potential



Exploration target at East Butte could prove larger than West Butte, once drilled out

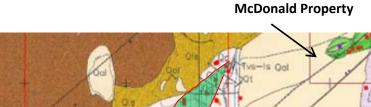


Keep Cool: Nearby Exploration Opportunity



SW Boundary of

- Keep Cool was explored through 40 drill holes, trenching, soil geochemistry and IP/resistivity surveys for a total of 15.2 line miles
- Project area located on the west side of Lander's Fork, one mile from the potential West Butte portal location
- Covers 2,040 acres of mineral rights with various surface owners
- Due to geologic similarities with McDonald, Keep Cool is an attractive exploration opportunity requiring similar UG analysis
- Angled core drilling between 200m and 400m total depth is needed to target and identify highgrade structures in this system





Keep Cool Mineral Trend

Location	Hole Id	Туре	from	to	Length ft	Au oz/st	Length m	Au g/t	Au gxm
Keep Cool	PDKC-91-007	?	465	475	10	0.078	3.0	2.7	8
	PDKC-91-020	?	45	55	10	0.087	3.0	3.0	9
	PIDKC-91-020	?	805	820	15	0.118	4.6	4.0	18
	PDKC-91-020	?	840	855	15	0.183	4.6	6.3	29
	PDKC-91-020	?	940	950	10	0.085	3.0	2.9	9
	PDKC-91-021	?	950	980	30	0.149	9.1	5.1	47
1	PDKC 91 021	?	1030	1040	10	0.064	3.0	2.2	7



MT Tech Strategy



2017:

- 1. Have acquired 228 boxes of maps, papers, logs, etc. Plan to scan, digitize, make more usable by others
- 2. Newmont's desire to relocate core
 Mt Tech has to find a home for <u>lots</u> of core

Longer Term:

- Have the data...
- Research opportunities in Geological Engineering, Mining Engineering, Hydro-Geology, etc.
- Partner with Industry?



YOUR EXPECTED ROLE



- Support research, partnering, and investments with next steps of this project.
- What else can you offer to strengthen education and programs at MT Tech through McDonald Project?



Potential High-grade Au+Ag Asset with Exploration Opportunities



Mineral Rights in the Neighborhood

Multiple deposits and exploration targets identified

McDonald Project:
Significant Resource Data
& Assets

- 600+ logged and assayed drill holes
- High grade Au and Ag resources identified
- Over \$80M spent on the project to date by previous owners
- Access roads maintained, includes monitoring wells
- Heated core storage facility located nearby (short or long term?)

Encouraging Underground Potential

- West Butte = underground potential, previously extensively drilled
- West Butte UG potentially contains 500koz Au at 7.2 g/t grade
- East Butte has underground potential.
- Further potential in the vicinity???



Be a part of the Solution!



Contact those below to inquire about your role with McDonald Project:

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